

ATTACHMENT 2-7 IG CONTINGENCY PLAN

1.0 INTRODUCTION: R315-8-4.2, R315-8-4.3

1.1 This contingency plan describes the actions that personnel at Igloo G at Dugway Proving Ground (DPG) will take in response to fire, explosion, or an unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water as required in Utah Administrative Code R315-8-4. This plan will be implemented immediately if a fire, explosion, or unplanned release of hazardous waste occurs that could threaten human health or the environment.

1.2 This plan describes the following:

- Emergency coordinator
- Coordination of emergency services
- Identification of potential emergencies
- Emergency response procedures
- Hazard assessment
- Evacuation plan
- Prevention of recurrence or spread of fires, explosions, or spills
- Identification, storage, and treatment of released materials
- Post-emergency equipment maintenance
- Recordkeeping and reporting
- Amendment of the contingency plan

1.3 The DPG organizations that are involved when the contingency plan for Igloo G include the Directorate of Environmental Programs (DEP) and the West Desert Test Center (WDTC). The Emergency Coordinators and other emergency personnel will be trained in the implementation of the Igloo G contingency plan as required by Attachment 2-4.

2.0 EMERGENCY COORDINATOR: R315-8-4.3(c), R315-8-4.6

2.1 The emergency coordinator or alternate is responsible for directing actions to be taken in response to a fire, explosion, or unplanned release of hazardous waste to the environment at Igloo G. The actions taken by the emergency coordinator or alternate are described in Section 6.0. The following individuals are designated as emergency coordinators for the CHWSF:

Primary Emergency Coordinator

*Joseph R. Gearo, Jr.
Directorate of Environmental Programs
1382 East Erda Way
Erda, UT 84074*

*(435) 831-3519 (work)
(435) 843-4343 (home)
(801) 558-1103 (work cell)*

3.0 COORDINATION OF EMERGENCY SERVICES: R315-8-4.3(b), R315-8-3.7

- 3.1** The emergency coordinator or their alternate has the authority to commit the appropriate resources to responding to the emergency and cleaning up afterwards.
- 3.2** The DPG Chemical Accident/Incident Response and Assistance (CAIRA) Team may assist with chemical agent emergencies at Igloo G. If DPG resources are not adequate to manage the emergency, assistance is requested from Deseret Chemical Depot in Tooele, UT.
- 3.3** The DPG U.S. Army Health Clinic is trained and equipped to provide emergency medical services to individuals who are injured in emergencies at Igloo G. If DPG emergency medical resources are not adequate to manage the emergency, assistance is requested from one of the following medical facilities:
- Tooele Valley Regional Medical Center, Tooele, UT
 - LDS Hospital, Salt Lake City, UT
 - Salt Lake Regional Medical Center, Salt Lake City, UT
 - Utah Valley Regional Medical Center, Provo, UT
 - University of Utah Hospital, Salt Lake City, UT
- 3.4** DPG has memoranda of agreement with these medical facilities through Evans U.S. Army Community Hospital, Fort Carson, CO, which is the closest Army hospital to DPG. Coordination agreements are listed in Table 1 of Attachment 2-5 of this Permit and copies are maintained on file at the CHWSF.
- 3.5** All local law enforcement agencies, fire departments, hospitals and civilian emergency response teams that may be called upon to provide emergency response will be given a copy of the contingency plan for Igloo G.
- 4.0** **IDENTIFICATION OF POTENTIAL EMERGENCIES: R315-8-4.7**
- 4.0.1** This section describes the following potential emergency situations that may occur at Igloo G and the possibility of any of situation threatening human health or the environment:
- Explosion
 - Fires
 - Spills and Releases
- 4.1** **Explosion**
- 4.1.1** Munitions recovered from the range may contain explosive components. Prior to storage in Igloo G, all range-recovered munitions (RRMs) are assessed using current military munitions storage standards. Only munitions that are safe or are rendered safe for long-term storage will be placed in Igloo G. Therefore, it is unlikely that an explosion will occur at Igloo G as a result of the storage of RRM.
- 4.2** **Fires**
- 4.2.1** Fires will only occur inside Igloo G as the result of an explosion. If a fire starts inside the igloo it will be allowed to burn, since the risk to the firefighters of fighting the fire is too great. The fire department may be used to stop the fire from spreading to the surrounding area. The area inside the Igloo G fenced facility is kept clear of vegetation to prevent fires.

- 4.2.2 If a fire starts outside Igloo G (i.e., wildfire), the fire department will attempt to stop the spread of the fire toward the Igloo G.

4.3 Spills and Releases

- 4.3.1 All of the RRM's stored in Igloo G are stored on secondary containment pallets that are capable of containing 100 percent of the volume of liquid chemical agent contained in the RRM. It is not anticipated that any liquid agent will escape from secondary containment to the floor of the igloo or to the outside. It is also not expected that more than one RRM will leak at a time.
- 4.3.2 A liquid spill of chemical agent could result in a vapor release of chemical agent. If a vapor release of CWM from one RRM occurs, it is not anticipated that individuals outside of the vicinity of Igloo G would be affected by the release because of emergency actions taken by DPG as discussed in Section 5.3.

4.4 Emergency Response Equipment: R315-8-4.3(d)

- 4.4.1 The Permittee shall maintain emergency response equipment listed in Attachment 2-6 of the Permit for Igloo G. In addition the Permittee shall inspect equipment listed in Attachment 2-6 as required by Attachment 2-3 of this permit.

5.0 IMPLEMENTATION AND EMERGENCY RESPONSE PROCEDURES: R315-8-4.3(a), R315-8-4.7(d)

- 5.0.1 The DPG CAIRA Plan will be implemented if chemical agent is released from Igloo G. This section describes when the Contingency Plan will be implemented in response to the following emergency situations at Igloo G:

- Explosion
- Fire that cannot be immediately extinguished
- Spill or release accompanied by any of the following:
 - Release of toxic fumes
 - Release of a reportable quantity (RQ) of a chemical or chemicals
 - Evidence of extensive leaching into soil

5.1 Explosion

- 5.1.1 In the event of an explosion at Igloo G, the discoverer or first responder will proceed as follows:
- From a safe distance, call 911 by telephone or notify Range Control by radio and supply the following information:
 - The type of incident
 - Type of material involved, if known
 - Location and source of the incident
 - A real extent of incident and estimated quantity of waste involved, if known
 - What is needed in terms of equipment and personnel to combat the emergency

- Until the emergency coordinator or alternate arrives, the senior employee present will be responsible for evacuation of personnel from the immediate vicinity

5.1.2 The emergency coordinator or alternate will perform the following actions:

- Begin evacuation of the area following policies and procedures in the CAIRA Plan (DPG)
- Perform a hazard assessment as described in Section 6.0
- If an RQ of any chemical has been released, notify the appropriate state and Federal agencies as described in Section 11.0. This notification should be done as soon as possible after discovery of the incident, preferably within 15 minutes.
- Assure that possible ignition sources are shut down or removed
- Notify local authorities if assistance is required

5.1.3 Once the emergency is over, the emergency coordinator or alternate has the following responsibilities:

- Oversee clean up of the area, decontamination of equipment, and disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas

5.2 Fire

5.2.1 In the event of a fire in the vicinity, which could threaten Igloo G the discoverer or first responder will proceed as follows:

- From a safe distance, call 911 by telephone or notify Range Control by radio and supply the following information:
 - The type of incident
 - Type of material involved, if known
 - Location and source of the incident
 - The extent of the incident and estimated quantity of waste involved, if known
 - What is needed in terms of equipment and personnel to combat the emergency
- If properly trained in fire extinguishers, attempt to extinguish a small fire, if possible

5.2.2 If the first responder extinguished the fire and no wastes were involved in the fire, the contingency plan does not need to be implemented and no external notifications are required.

5.2.3 If the fire cannot be extinguished or the fire began inside Igloo G as the result of an explosion the first responder will perform the following tasks

- From a safe distance, call 911 by telephone or notify Range Control by radio and supply the following information:
 - The type of incident
 - Type of material involved, if known
 - Location and source of the incident
 - The extent of the incident and estimated quantity of waste involved, if known
 - What is needed in terms of equipment and personnel to combat the emergency
- Until the emergency coordinator or alternate arrives, the senior employee present will be responsible for evacuation of personnel from the immediate vicinity
- If the fire began in Igloo G or has made contact with Igloo G then no attempts will be made to extinguish the fire.

5.2.4 The emergency coordinator or alternate will perform the following actions:

- Perform a hazard assessment as described in Section 6.0.
- Begin evacuation of the area following policies and procedures in the CAIRA Plan (DPG).
- If an RQ of any chemical has been released, notify the appropriate state and Federal agencies as described in Section 11.0. This notification should be done as soon as possible after discovery of the incident, preferably within 15 minutes.
- Shut down operations in the surrounding area
- Assure that possible ignition sources are shut down or removed.
- Notify local authorities if assistance is required for the evacuation.

5.2.5 Once the fire is over, the emergency coordinator or alternate has the following responsibilities:

- Oversee clean up of the area, decontamination of equipment, and disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used.
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas.

5.3 Spills or Releases

5.3.0 The procedures to follow for spills and releases will be categorized into the following:

- Vapor release inside Igloo G detected during first entry procedures
- Liquid spill inside Igloo G detected during first entry procedures

5.3.0.1 Any vapor or liquid release detected during first entry of the igloo will require implementation of the contingency plan.

5.3.1 Vapor Release Inside Igloo G Detected During First Entry Procedures

5.3.1.1 If real-time air monitoring results indicate that there has been a release of CWM inside Igloo G, procedures described in standing operating procedure (SOP) DP-0000-T-107, First Entry Monitoring of Toxic Chemical Agent Storage 3643 (Igloo G) and Monitoring Requirements for Chemical Agents, will be followed.

5.3.1.2 The emergency coordinator or alternate is responsible for the following:

- Perform a hazard assessment as described in Section 6.0
- If there is imminent danger of chemical agent exposure, determine if evacuation is necessary and follow the procedures in the CAIRA Plan (DPG)

5.3.1.3 Once the spill is contained and the source of the spill or release stopped, the emergency coordinator or alternate has the following responsibilities:

- Oversee disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used that are listed in Attachment 2-6
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas and determine that results of air monitoring show that chemical agent concentrations are below the levels established in the Permit

5.3.2 Liquid Spill Inside Igloo G

5.3.2.1 If a liquid spill is discovered inside of Igloo G, the procedures described in SOP DP-0000-T-107, First Entry Monitoring of Toxic Chemical Agent Storage 3643 (Igloo G) and Monitoring Requirements for Chemical Agents, will be followed.

5.3.2.2 The emergency coordinator or alternate is responsible for the following:

- Perform a hazard assessment as described in Section 6.0
- If there is imminent danger of chemical agent exposure, determine if evacuation is necessary and follow the procedures in the CAIRA Plan (DPG)

5.3.2.3 Once the spill is contained and the source of the spill or release stopped, the emergency coordinator or alternate has the following responsibilities:

- Oversee disposal of waste generated as a result of the emergency ensuring that proper protective clothing and equipment are used
- Determine if it is safe to resume operations by performing an assessment of the safety and integrity of affected areas and results of air monitoring show that chemical agent airborne concentrations are at background levels

6.0 HAZARD ASSESSMENT: R315-8-4.7(c) and (d)

6.1 The emergency coordinator or alternate will assess the possible hazards to human health and the environment that may result from the fire, explosion, spill, or release of hazardous waste stored in Igloo G. The assessment will consider both direct and indirect effects of the fire, explosion, spill, or release. The assessment will be based on the following information:

- Character, exact source, amount, and area extent of any release materials
- Effects of exposure to hazardous waste
- Effects of mixtures of hazardous waste involved in the incident

6.2 The assessment will help determine if there is a significant risk to human-health or the environment and if additional evacuation is required. If evacuation is required beyond the vicinity of Igloo G, the installation-wide CAIRA Plan (DPG) will be implemented. If there is a threat to human-health or the environment outside of DPG then local authorities will be notified to assist in evacuation and the National Response Center or the U.S. Environmental Protection Agency (EPA) regional on-scene coordinator, and the Utah Department of Environmental Quality (UDEQ) will be notified immediately. The addresses and telephone numbers of these agencies and information to be supplied are in Section 11.0.

7.0 EVACUATION PLAN: R315-8-4.3(e)

7.1 All facility personnel are instructed in evacuation signals, procedures, and routes. The procedures for evacuation from Igloo G and surrounding area are described in this section.

7.2 Igloo G is not an occupied building, there are no occupied buildings in the immediate area and the only individuals that would be close to Igloo G will have access to appropriate protective equipment. Therefore an evacuation of Igloo G will only be required in case of fire or explosion in coincidence with people entering Igloo G. The evacuation diagram for Igloo G is in Figure 7-1.

8.0 PREVENTION OF RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR SPILLS: R315-8-4.7(e)

8.1 All operations near a hazardous waste spill, fire, or uncontrolled explosion site will be suspended until cleared by the emergency coordinator or alternate. Prior to restarting operations, process and structural equipment will be inspected for leaks, cracks, or other potential problems. Released waste will be properly collected and contained. Containers of hazardous waste will be properly managed.

9.0 IDENTIFICATION, STORAGE, AND TREATMENT OF RELEASED MATERIALS: R315-8-4.7(b), (g), and (h)(1)

9.1 Whenever there is a fire, explosion, or unplanned release, the emergency coordinator or alternate will identify the character, exact source, amount, and area extent of any released material. Identification of materials will be made by a review of facility records, observation of the materials, or, if necessary, laboratory analysis.

- 9.2** The emergency coordinator or alternate will coordinate treatment, storage, and disposal of recovered waste, contaminated soil or water, or any other material that results from a fire, explosion, or release at the facility.
- 9.3** Decontaminated materials, decontamination solutions, and absorbents will be containerized. Damaged or leaking munitions will be overpacked in accordance with SOP DP-0000-T-107, First Entry Monitoring of Toxic Chemical Agent Storage 3643 (Igloo G) and Monitoring Requirements for Chemical Agents, and returned to the area in which they were stored, if there are no other hazards associated with them. Decontamination of concrete storage pads, structural devices, and secondary containment pallets will be done in accordance with procedures described in the CAIRA Plan (DPG). The spent decontamination solution will be containerized and managed as solid or hazardous waste. Personal protective equipment will be decontaminated and managed in accordance with procedures described in the CAIRA Plan (DPG).
- 9.4** Waste that may be incompatible with the released material will not be stored in the area where the release occurred until clean-up procedures are completed. All operations in the area not directly related to release control and clean-up activities will be suspended until cleared by the emergency coordinator or alternate. Access to the clean-up area will be limited to personnel participating in clean-up operations.
- 10.0** **POST-EMERGENCY EQUIPMENT MAINTENANCE: R315-8-4.3(d), R315-8-4.7(h)(2)**
- 10.1** Due to the nature of materials handled at DPG as part of its supply and maintenance missions, DPG maintains equipment suitable for emergency response operations. Attachment 2-6 of this permit describes emergency equipment maintained by for use at Igloo G.
- 10.2** No fire control, spill control, or decontamination equipment is stored at or in Igloo G. The necessary equipment is brought to Igloo G each time personnel enter Igloo G. Whenever Igloo G is opened for any purpose, first entry procedures described in SOP DP-0000-T-107, First Entry Monitoring of Toxic Chemical Agent Storage 3643 (Igloo G) and Monitoring Requirements for Chemical Agents are followed and emergency response personnel are on site. Attachment 2-6 of this permit contains the list of emergency supplies and equipment available at Igloo G during entry.
- 10.3** All emergency response equipment used in response to an emergency at Igloo G will be decontaminated and repaired prior to reuse or it will be replaced. Discarded equipment will be managed as solid or hazardous waste. All emergency equipment used for Igloo G entry will be inspected in accordance with procedures in Attachment 2-3 of this permit.
- 10.4** Before operations are resumed at Igloo G, the emergency coordinator or alternate will notify UDEQ that:
- Clean-up of the affected areas has been completed so that normal operations may be resumed
 - All emergency equipment has been cleaned and is fit for use

11.0 RECORDKEEPING AND REPORTING: R315-9-1(b); 9-4 and (c), R315-8-4.7(i) and (j)

11.1 Any emergency that results in a release to the air, soil, or water of hazardous waste or hazardous constituents must be reported to UDEQ if the release exceeds RQs or could threaten human health or the environment. All chemical agent liquid spills, regardless of quantity, or vapor detections, at or above the following limits, within Igloo G must be reported to UDEQ (see Attachment 2-11, Section 6):

- Release of 0.0001 milligrams per cubic meter (mg/m³) of GA, GF or GB
- Release of 0.00003 mg/m³ of GD
- Release of 0.003 mg/m³ of mustard (H, HD, or HT)
- Release of 0.003 mg/m³ of Lewisite
- Release of 0.00001 mg/m³ of VX
- 1 kilogram (kg) or more of acute hazardous waste (P-list such as P999)
- 100 kg of hazardous waste (characteristic, F-, K- or U-lists)
- Any amount of hazardous waste that presents a potential threat to human health or the environment

11.2 If an RQ of a chemical has been released the appropriate agency or agencies will be notified by phone within 15 minutes, if possible, of the onset of the emergency and provided the following information:

- Name and telephone number of the reporter
- Name and address of the facility
- Time and type of incident (e.g. release, fire)
- Name and quantity of material(s) involved, to the extent known
- The extent of injuries, if any
- The possible hazards to human health and the environment outside the facility

11.3 The addresses and phone numbers of the agencies to which reports are made are:

Utah Department of Environmental Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84116-4870
24-hour toll-free phone (800) 572-6400 or
(801) 536-4123

11.4 Within 15 days a written report will be provided to the Executive Director of UDEQ which will contain the following:

- Name, address, and telephone number of the owner or operator

- Name, address, and telephone number of the facility
- Date, time, and type of incident
- Name and quantity of materials involved
- The extent of injuries, if any
- An assessment of actual or potential hazards to human health and the environment, where applicable
- Estimated quantity and disposition of recovered material that resulted from the incident

12.0 AMENDMENT OF THE CONTINGENCY PLAN: R315-8-4.5

12.1 The Igloo G contingency plan will be revised under any of the following circumstances:

- Revisions to facility permit
- Failure of the plan in an emergency
- Changes in the facility design, construction, operation, maintenance, or other circumstances that materially increase the potential for fires, explosions, or discharges of hazardous waste or hazardous waste constituents or changes the response necessary in an emergency
- Changes in the list of emergency coordinators
- Changes in the list of emergency equipment

12.2 The Igloo G contingency plan will be reviewed semiannually if revisions have not been made. Revisions to the contingency plan, emergency coordinator list, equipment lists, and memoranda of agreement require a formal modification of the permit in accordance with R315-8-4.5 and R315-3-4.3.

Figure 7-1. Igloo G Emergency Evacuation Routes

